PAN AMERICAN fisherman

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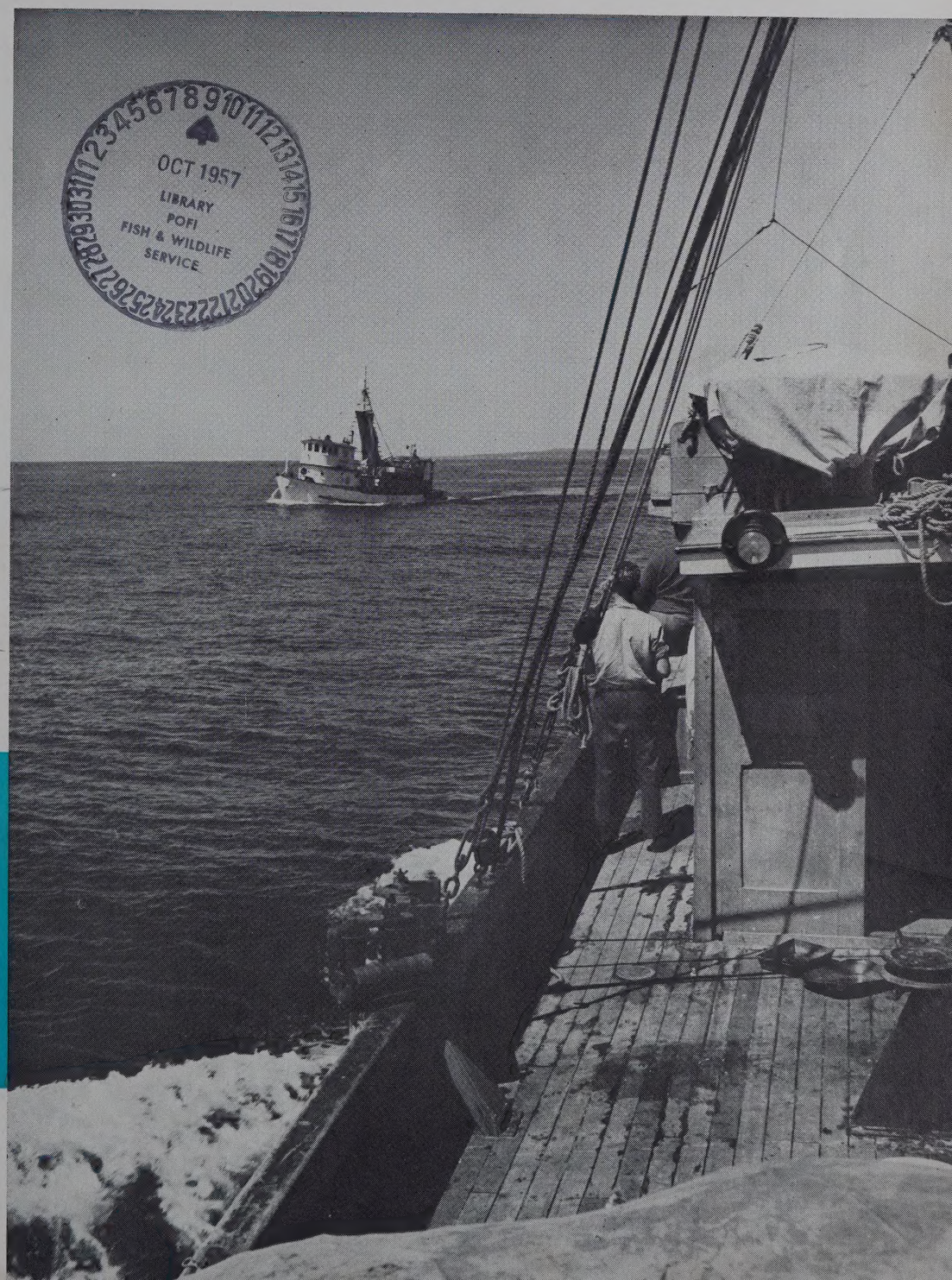

SEPTEMBER
1957

NATIONAL TUNA WEEK

October 31 to
November 9

ROBERT S. STEVENSON

Portrait by Fabian Bachrach

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No. 1 TUNA LANE • SAN DIEGO, CALIFORNIA

Published Monthly • *Established 1947*

PAN AMERICAN fisherman

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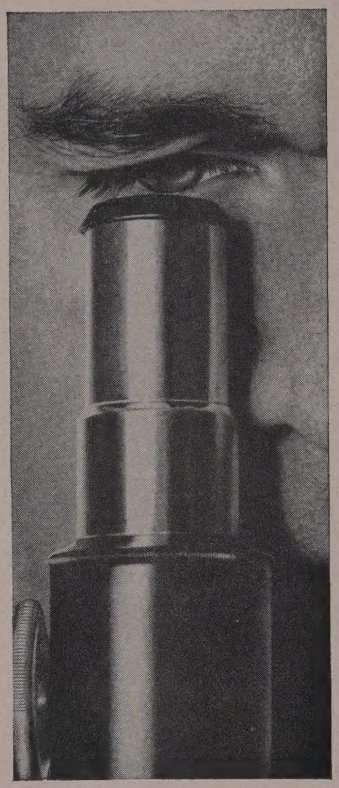

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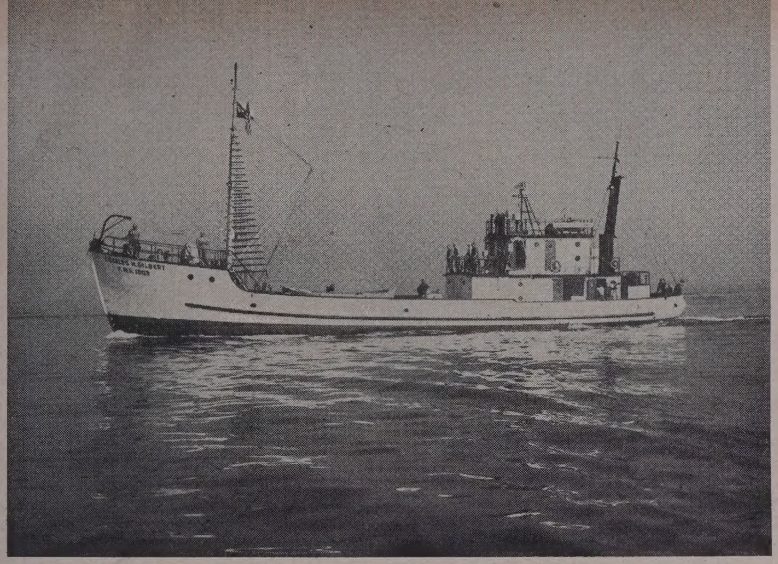


The Charles M. Gilbert—Typical FWS Research Vessel.

ALBACORE SURVEY

AN intensive study of albacore tuna fishing grounds between Hawaii and the West Coast by two Fish and Wildlife Service research vessels and seven chartered commercial fishing boats was completed August 10 with the return of the *John R. Manning* to its Honolulu base.

According to Dr. A. L. Tester, director of the Pacific Oceanic Fishery Investigations, the nine-vessel task force was the largest fleet ever marshalled for a simultaneous attack on the mysteries surrounding the movements of the most valuable of the tuna species into the summer fishing grounds of the eastern Pacific.

Dubbed Operation NEPAS, for "Northeastern Pacific Albacore Survey," the survey took in a broad area extending north and east of Hawaii to the American mainland, with intensive coverage of a 350-mile strip along the West Coast from the Columbia River to southern California.

Albacore were found to be widely distributed within the survey area east of 145°W. longitude, with offshore concentrations 700-800 miles west of San Francisco and 500 miles off Eureka, and with inshore concentrations 100 miles off Pt. Arena and Cape Mendocino, 300 miles off Pt. Arguello, and 200 miles off Cape Blanco.

The NEPAS operation was carried out in two steps, the first being a preliminary reconnaissance by the research ships *John R. Manning* and *Hugh M. Smith* between Hawaii and the West Coast. The *Manning*, which sailed from Honolulu June 11, trolled and fished with gillnets for albacore in a zigzag pattern along the coast, while the *Smith*, sailing on July 1, followed up with a series of oceanographic stations in the same area to gather information on the temperature and other characteristics of the waters through which the albacore were migrating into the fishing grounds.

Observations of albacore schools during this period were reported by radio from the Fish and Wildlife Service vessels for the information of commercial fishermen. This stage of Operation NEPAS was completed July 16, and both ships entered the port of Astoria, Oregon.

The second phase of the survey, carried out between July 22 and August 7, was a coordinated movement of the two research vessels and the seven commercial albacore boats from the coast out 350 miles and back. This stage of the operation revealed that several of the inshore aggregations of albacore schools that were spotted earlier in the preliminary reconnaisance had become more concentrated and were beginning to offer fishing conditions suitable for commercial operation, particularly off Pt. Arena and Cape Mendocino. The survey fleet captured altogether 1,004 albacore tuna, of which 458 were tagged and released in the hope that recaptures during the main fishing season would provide further information on their movements in the coastal fishing grounds.

Operation NEPAS has added to the fishery biologists' knowledge of the broader migratory movements of the albacore, knowledge which they must have in order to understand the make-up of the albacore population in the North Pacific and to estimate the production that can be expected from that population. A by-product of the scientific expedition has been the assistance given to the West Coast fishermen in probing the off-shore albacore resources with the possibility of increasing the range of operations, the length of the season and, of course, the catch.

The albacore, which brings the highest price per ton of any tuna species and which is the only one that can legally be labelled "white-meat tuna," supports major summer fisheries off Japan and off the American west coast. In the past few years several recaptures by Japanese fishermen of albacore tagged and released off the American coast, some 4,000 miles away, and the recent recapture on the West Coast of an albacore tagged by a Fish and Wildlife Service vessel working north of Hawaii have shown that some, at least, of the North Pacific albacore make ocean-wide migrations, and the resource may turn out to be a truly international one, exploited by both the U.S. and Japan.

At present, however, the great expanse of water between the Japanese and the American albacore fishing grounds is largely unexplored territory, and the ways of the albacore there are almost as little understood as their spawning and the development of their young. The results of Operation NEPAS should aid in added information gathered on other North Pacific cruises of albacore distribution and migration.

Fisheries Trade Fair

The second International Fisheries Trade Fair will be held in Copenhagen, Denmark, from September 27 to October 6, 1957. A total of 13 countries will present their products. Fish, fishery products, nets, navigation equipment, echo-sounding equipment, engines, fishing gear, machinery for all purposes in connection with the fisheries trade, etc., are some of the things that will be displayed.

The first International Fisheries Trade Fair, Copenhagen, 1956, was visited by buyers from 33 countries.

FISHING GROUND SURVEYS . . .

Off the Republic of Brazil

Translated by
W. G. VAN CAMPEN
U.S. Fish and Wildlife Service
Honolulu, Hawaii

In view of the topography of Brazilian waters, surveys by the *Toko Maru* were carried out in three steps: 1) the southern part of the continental shelf, 2) the tuna longlining grounds off the eastern part, and 3) the northern part of the continental shelf (vicinity of the mouth of the Amazon River).

1. *Grounds of the Southern Part of the Continental Shelf*

The area of the continental shelf south of 28°S. latitude is about 83,000 square miles. The continental shelf extends to depths of about 150 meters, beyond which the bottom falls off steeply. From the latter part of December to the middle of March, 67 two-hour trawl hauls were made and observations were made on coastal migratory fishes (sardines, mackerel-scad, etc.). During this period, 85 oceanographic stations were occupied.

The results of the trawling survey were: (a) Catches were larger in shallow water and in the south, tended to be smaller in deeper water and toward the north. In waters deeper than 40-50 meters there were rarely indications of potentially profitable fishing. (b) In general, the fishes which were always most abundant in the actches were small sharks and many species of rays. The market value of these fish is low. (c) The fish of high marketvalue—pescada, corvina, and other sciænids—were generally abundant in shallow water. (d) The number of different species captured was about 160, fewer than expected. (e) The bottom was good, and of the 67 hauls, only one resulted in a torn net. (f) There was always some wind and sea, but never enough to interfere with fishing.

These results indicate that it would be more profitable to fish this area with small boats rather than with large vessels. However, the survey was made during the middle of the Southern Hemisphere summer, and it may be thought possible that different results would be obtained in winter.

In the survey of coastal migratory fishes, the sonic fishfinder and night-lights were used. There was a high frequency of traces of school on the fishfinder, particularly in shallow water. The sardine is one of Brazil's most important fishes, but within the scope of this survey no indication of phototaxis was seen, and the fish could not be taken with the night-light. It was thought that it would be effective to locate the fish by echo ranging and then use a roundhaul net, but this could not be tried because the *Toko Maru* was not equipped for this type of fishing.

2. *Tuna Longlining Grounds off the Eastern Area*

From about 22°S. north to the vicinity of the Amazon's mouth there are coral reefs along the coast, and the prospects for coastal fisheries are slight, so a tuna longlining survey was made. Longlines were fished 13 times, and during this period 29 oceanographic stations were occupied. The stations were distributed north and south at 50 to 300 miles off the coast. The results were briefly as follows: (a) Catch rates (number of fish caught per 100 hooks fished) ranged from a low of 2.5 to a high of 20, or in terms of weight of a day's catch, from 334 kilograms to an estimated maximum of 2,500 kilograms. (b) A fishing ground boundary was found at about 4°S., where there was also a sharp change in oceanographic structure. North of the boundary yellowfin were the most abundant tuna in the catch, while south of it albacore were the main species. Quite a few bluefin tuna turned up in the vicinity of the boundary. (c) The northern limit of the northern yellowfin grounds was not made clear by the present survey. Albacore fishing appeared to fall off to the southward, but fair catches were still being maintained at 22°S. (d) Few sharks were caught, and shark damage to the catch was less than in the Indian or Pacific oceans. (e) There were steady force 3 winds, mainly from the northeast, which were not thought to be such as to hamper the operations of a regular longliner.

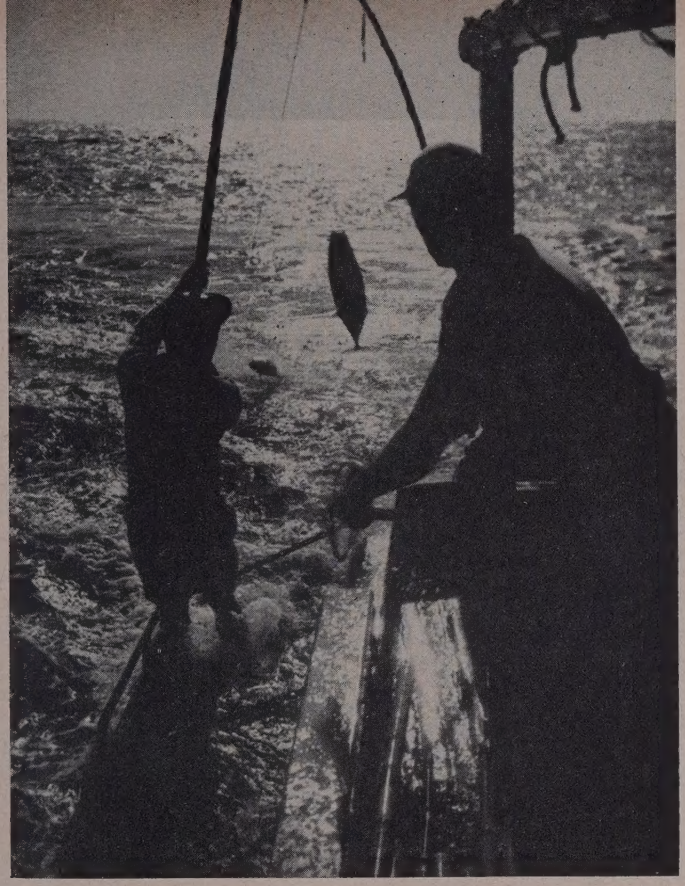
In general the area can probably be said to be a superior tuna longline fishing ground. Since the grounds are close to the coast, it is thought that it would be both possible and profitable to fish them with small vessels.

The scale of longline fishing on this survey was held down to about one-eighth that of a commercial boat, but it is estimated that the catch per day for a regular longliner would be 3-5 tons on the albacore grounds, or 10-15 tons on the yellowfin grounds.

It is difficult to form any definitive ideas of the structure of the South Atlantic tuna grounds as a

Translator's note: The articles which follow were translated from a foreign trade newspaper of an unofficial character, and no attempt has been made to check the accuracy of the facts reported in them. The source is, however, reputable and widely circulated, and it is believed to reflect accurately opinions and reports prevailing in foreign industry circles.

The *Toko Maru*, a fisheries patrol ship of trawler type (1,110 tons gross) belonging to the Japanese Fisheries Agency, returned to Tokyo July 25, completing a 9-months' around the world voyage in the course of which surveys were made of fishing grounds off Brazil and the Dominican Republic. The scientific party aboard was headed by Dr. Hiroshi Nakamura, Director of the Nankai Regional Fishery Research Laboratory and an outstanding authority on tunas and spearfishes.



whole, because of inadequate data, but (1) the different current systems form different habitats, and have different characteristics as fishing grounds, and (2) within a given current system the geographical differences in the character of the fishing grounds appear gradually, except where affected by the topography, and sharp changes, like those between current systems, do not appear. If this theory is admitted, the areas of each of the major currents, such as the South Equatorial and the Equatorial Countercurrent, each have their own different characters as fishing grounds, and they will preserve such characteristics as are referred to in (b) and (c) above as we follow them offshore to the eastward, with only gradual changes in fishing ground characteristics within the current systems.

In terms of distance to the fishing grounds, it will be most advantageous to base in such port cities of the northeast as Salvador, Recife, and Fortaleza, whereas southern cities like Rio and Santos are better from the point of view of markets and bait supply.

3. *Fishing Grounds of the Northern Continental Shelf (Around the Mouth of the Amazon)*

In this region the continental shelf extends to depths of around 100 meters, with an area of around 73-000 square miles. The bottom is generally covered with coral and rock reefs and is rough, with the echo sounder showing saw-toothed traces, the "teeth" being mostly 2-3 meters high. This condition is especially marked south of the river mouth, being somewhat ameliorated north of the river, where there are accumulations of mud. Around the river mouth, silt makes the ground unfit for trawling. Near the Guiana border there are some rather extensive areas suitable for trawling. During the period of the survey there were constant northeast winds of around force 3, and the current ran strongly northwest.

Hauls were made at first at the planned station positions, but so many nets were torn that it was judged difficult to complete a comprehensive survey in this way, and it was decided to use echo sounding and oceanographic observations to find places to fish. By this system 13 1-hour hauls were made, with trouble developing on only six of them. At the same time, 63 oceanographic stations were occupied.

Because of the topography, this area offers little possibility of large-scale trawling by big ships. The fish taken were not such as to attract attention, and it appeared that the strong currents would in many cases interfere with operations. It appears to offer some possibilities as a shrimp ground, but because of the type of bottom, it is thought that operations by small vessels would be more advantageous than the use of large ships. However, without a great deal of experience on the grounds, operation would probably be difficult.

Surveys in the Dominican Republic

Survey work in waters of the Dominican Republic comprised one trawl haul (net torn), five hauls with a shrimp net, and six longline sets, with 23 oceanographic stations occupied during the period. Because of the topography, there was thought to be little to be hoped for from the coastal fisheries, and results of the survey confirmed this belief. The area is thought to be fairly promising as a tuna longlining ground.

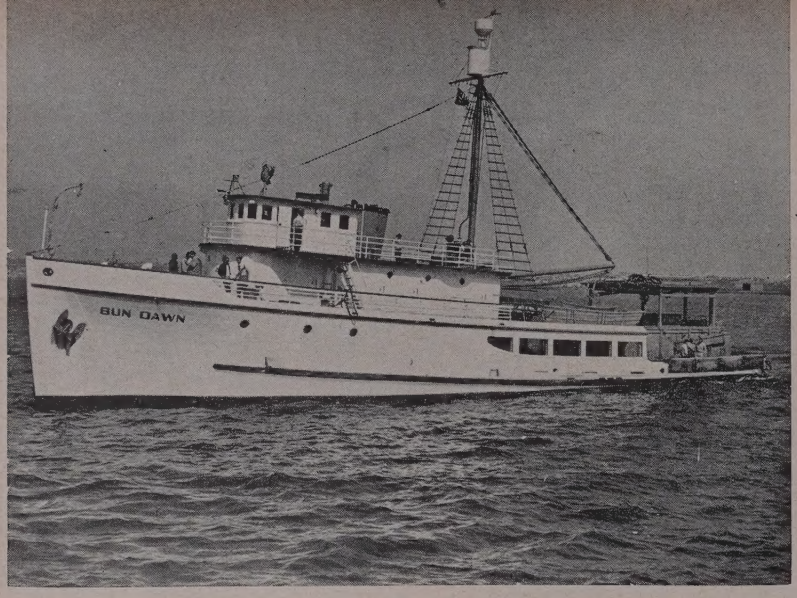
Within the scope of the survey, it was judged that the Caribbean side is mainly a yellowfin ground and the Atlantic side principally an albacore and spearfish ground. There were constant northeast winds of about force 3, which hampered operations of the small fishing boat used for longlining but which would not bother a -regular longline vessel. Since the grounds are close in, operation by smaller vessels is probably quite possible. *

Vessel Insurance

An 800 page report on fishing vessel insurance recently was sent to the U.S. Fish and Wildlife Service, Washington, D. C., by the Boston University Bureau of Business Research, which recently conducted the study.

The report, with four appendices and over 200 tables, is based on interviews with vessel owners, industry spokesmen, and insurance underwriters and brokers. It contains specific recommendations for the government, boat owners and insurers.

The two-year project included the major fishing areas of California, New England and the Gulf Coast waters. The Boston University Bureau of Business Research, established in 1928, was one of the first college groups specializing in business and economic research projects.



The Sun Dawn Goes Down

THREE TUNA CLIPPERS SINK DURING AUGUST

August turned out to be a bad month for the San Diago tuna clipper fleet—three ships went down during the last week of the month, but all of the crew members were rescued.

First, the *Clara Marie* burned and sank in Asuncion Bay about 300 miles south of San Diego. Its eight crewmen found refuge at a lobster camp until arrival of the Coast Guard cutter *Perseus* which returned them to home base.

The owners were listed as Frank and Antonio Balestrieri and Frank Mangiapane, all of San Diego.

Next, the *Palomar* went down off the Baja California coast, and its 11 crewmen were picked up by a Greek freighter, according to a radiotelephone message from Capt. Minoru Takasagi of Point Loma.

The tuna clipper *Elena* took the fishermen aboard from the freighter and returned them to San Diego.

Managing owner of the *Palomar* was reported as the Coast Fisheries of Terminal Island.

Last day of August reported the end of the 128-foot tuna clipper, *Sun Dawn*. It sank five miles west of Todos Santos Island off North Ensenada.

The Coast Guard reported that the skipper, Frank Zouca of San Diego, radioed at 8:30 a.m. that the ship was taking on water fast and in sinking condition. At 10:40 a.m. it went down, said a radio message from the fishing boat *Tiburon* which picked up all 14 crew men of the *Sun Dawn*.

The crew arrived that night by bus in Tijuana where they were met by relatives. Managing owners are William Carbral of Lemon Grove and his brother John of San Diego. Cause of the sinking was not immediately determined by the Coast Guard which scheduled an inquiry.

Federal Funds for Fishery Education

Allotments of federal funds have been made to the various states and territories for vocational education in the fishery industry. Although the original pact authorized an annual appropriation of $375,000, the Congress appropriated only $228,000 for this program. The State Vocational Director for the individual States will be responsible for developing the programs felt to be most beneficial to the commercial fishing industry, and in line with an equal state amount to match the federal funds. This is the amount granted to each Pacific Coast State and territory:

California	$37,301
Oregon	4,195
Washington	13,612
Alaska	10,429
Hawaii	1,642

Engineering Study on FREEZING FISH AT SEA

A contract has been awarded by the Fish and Wildlife Service for an engineering study of a new North Atlantic trawler equipped to freeze fish at sea.

The $15,000 contract awarded to naval architects located in Boston, may lead to significant improvement in New England's commercial fishing operations.

Under present conditions, vessels depend upon ice to preserve the cargo and must return to port after ten days of fishing, often only partially loaded. Processors are faced with alternate periods of glut and scarcity with little or no chance of stockpiling the catch.

Basic specifications laid down by the Fish and Wildlife Service are that the plans must provide for a steel-hull, diesel-powered trawler capable of operating in any fishing weather and at distances much beyond present limits. It must be more than 140-feet long with sufficient space for the refrigeration equipment necessary for freezing at sea, sufficient "payload" space to permit profitable operation, and have the mechanical equipment necessary to handle fish with utmost care.

The Service's exploratory fishing vessel *Delaware* in recent months has returned with two 100,000-pound loads of fish fresh-frozen at sea and delivered the loads in a "sea fresh" condition. These were large-scale tests of techniques and equipment. Portions of these fish were used for further experimental studies ashore and the balance sold at auction.

New Type Shrimp Cannery in Alaska

A new shrimp canning operation in Wrangell, Alaska, which was started in July, 1957, introduces two new developments into the Alaska industry, according to the FAWS Branch of Commercial Fisheries. For the first time, Alaska shrimp are being picked by machine rather than by hand. The machine used is similar to those used by the shrimp industry on the Gulf of Mexico and in the State of Washington. The new cannery also differs from all other shrimp plants in Alaska in that the shrimp meats are marketed as a canned, heat-processed product rather than as a fresh or frozen one.

Joint Japanese-American Tuna Meeting

Wheels began turning last month in an unprecedented cooperative campaign is expected to be approxianese tuna industries to expand the market for canned tuna in the United States.

Five representatives from each industry group comprising a joint executive committee started the campaign rolling at a meeting in Terminal Island, California. They named an operating committee—made up of three Japanese and three Americans —to start preliminary work on the promotion drive.

Both delegations expressed agreement on the aim of the program and voiced the hope that it would be successful according ot M. J. Gorby, Chairman of the U.S. tuna industry group.

Total expenditure of the advertising, publicity and promotion campaign by the United States and Japmately $700,000, but final decision of the exact amount to be appropriated will be made at a meeting of the executive committee scheduled soon. In the interim the Japanese representatives will discuss the financial details with the Japanese tuna industry and the Japanese government.

Committee Members

Named as American members of the operating committee are M. J. Gorby, president California Marine Curing and Packing Co.; Donald P. Loker, vice president, Star-Kist Foods, Inc.; and W. B. Dugan, vice president, Van Camp Sea Foods Co.

The Japanese members are Kazuo Kamogawa, Taiyo California Inc.; Fumio Kinoshita, Tuna Packers Association of Japan; and Tatsuro Kanbe, International Tuna Fish Association.

New Edition of Tide Tables

The 1958 Tide Tables for West Coast North and South America (including the Hawaiian Islands) have been released for public distribution.

This edition, published in a new format, contains the daily predictions of times and heights of high and low waters, listed in the same column in chronological order, for 38 reference stations. The tidal differences and other constants, by means of which predictions can be obtained for about 1,000 other places in North America, South America and the Hawaiian Islands, are also given.

The format change for the Tide Tables was adopted to facilitate automatic printing from the tide predicting machine. The new format provides for an increase in size to approximately 7 by 10 inches which not only results in greater legibility due to the use of larger type but also brings the Tide Tables more in line with the size of related nautical publications for easier storage.

Copies of these Tide Tables are sold by the sales agents, district offices and the Washington office of the Coast and Geodetic Survey. Price 50 cents per copy.

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Tuna Industry to be Studied

The Senate Finance Committee, in response to an appeal from California Senators William F. Knowland and Thomas H. Kuchel, has "directed" the U.S. Tariff Commission to bring up to date information about the status of the American tuna fish industry and the effects of foreign competition.

By a formal Resolution citing "substantial changes" in the tuna trade, the Finance Committee called on the Tariff Commission to up-date its March 1953 report on the tuna business by conducting a supplementary investigation and reporting by next February 1.

Sen. Kuchel, making the announcement for the two California Senators, said new data is needed as the basis for legislation to ward off financial disaster threatening American tunaboat owners, fishermen, and cannery workers. The information sought from the Tariff Commission probably will be used in connection with efforts of Senators Magnuson of Washington and Kuchel to equalize tariff and trade agreement rates relating to foreign tuna imports.

The Finance Committee resolution, instructing the Tariff Commission to hold a public hearing, noted that developments in the more than four years since the last investigation "have additionally affected the domestic tuna fishing industry."

Fishery Imports in 1956

A new record for the value of imported fishery products was reached in 1956 when products valued at $281 million at the foreign port of shipment were received in the United States. This was 10% over the 1955 value, according to a review of the import trade made by the Bureau of Commercial Fisheries. Since 1950 (the first post-World War II year of volume fishery products imports) there has been an increase of 42% in the annual value of fishery products imports.

While a new high in the value of imports was attained in 1956, the quantity was only the fifth largest on record—about one billion pounds. This was about the same quantity as received during 1955 and 1953, but considerably less than the record year of 1952 and the runner-up, 1954. Imports of fish meal during 1956, which were about half those of 1952, were principally responsible for the decline in the quantity of import trade. Fish meal imports totaled 408 million pounds during 1952 and 189 million pounds during 1952 and 180 fishery products imports remained at a high level in 1956—788 million pounds—second only to 1954.

The United States is the world's leading importer of fishery products. It has been estimated that for every ten pounds of domestic catch taken and processed, the equivalent of five pounds of foreign-caught fish is used in the domestic market. Imports during 1956 provided about 56% of all the groundfish fillets used in the United States, 20% of the canned tuna, over one-third of the frozen tuna used in canning, 34% of the shrimp consumed, 15% of the canned salmon, 46% of the Northern lobsters, 70% of the canned crabmeat. and 24% of the fish meal.

Edible fishery products imported into the U.S. were valued at $233 million, and inedible products at $48 million.

The primary source of imported fishery products was Canada which supplied products valued at $95 million, in large part consisting of ground-fish fillets, lobsters, salmon, fresh-water fish, and fish meal. Japan was the second in value with products valued at $71 million, consisting of frozen and canned tuna, canned crabmeat, canned oysters, frozen and canned salmon, and pearls.

Mexico supplied products valued at $28 million, consisting largely of fresh and frozen shrimp. Imports from other Latin-American countries were valued at $26 million.

Products imported from Norway were valued at $13.6 million, and consisted mainly of canned sardines. The Union of South Africa supplied products valued at $8 million; Peru $7.3 million; Iceland, $6.2 million; Portugal, $4.9 million; and Denmark, $2.8 million.

More detailed reports are being prepared on the United States foreign trade in fishery products. These publications will provide a summary of imports by product and country of origin and point up significant trends in the foreign fishery trade of the United States.

Story of Tuna from Ocean to Table

The story of tuna—from Pacific waters to family dinner table—is woven into a dramatic tale of great fishing fleets, a multi-million-dollar canning industry and tasty food combinations in the September 17 issue of LOOK Magazine.

In telling the facts of where and how commercial tuna is caught, the article, titled "Tuna, America's Mighty Catch," describes the various methods used to bring in the annual catch, whose value this year, when processed and canned, is estimated at $225 million.

"Tuna fishing is dangerous and exhausting work, requiring men of courage and muscle," LOOK declares in special tribute to the fisherman who ply the waters from California to Peru.

Meanwhile, the article, in stressing the venturesome labor of the fishing fleets, does not neglect the tuna's final destination, the housewife's market basket. It mentions the low price and high nutritional value of the canned fish, and gives recipes for a number of unusual tuna combinations, including soup, an appetizer and main dishes.

In addition to canned tuna, the recipes call for canned chicken broth, mushroom soup, sauerkraut, tomato sauce and tomato paste, as well as such other ingredients as egg noodles, rice, butter, margarine, cheese, wine, prepared mustard, Worcestershire sauce, vegetables, seasonings and spices.

Do Albacore Spawn Around Samoa?

The persistent efforts of fishery scientists to pry into the love life of the albacore tuna recently took Tamio Otsu, research biologist of the Pacific Oceanic Fishery Investigations, all the way to American Samoa in search of expectant females of the long-finned tuna species.

According to Dr. Albert L. Tester, director of the Honolulu laboratory of the U.S. Fish and Wildlife Service, the albacore is one of the widest ranging of the tunas, being taken in the temperate waters of both the North and South Pacific as well as in the tropical areas between, but where it spawns and where its young develop is still a mystery to science.

Comparatively small, as tunas go, the albacore is highly prized by canners because of the pure white color of its cooked flesh, and it brings a higher price to the fisherman than any other tuna. There are thriving fisheries for the surface-swimming schools of smaller albacore off the American west coast and in the western Pacific off Japan, and production of the larger, deep-swimming fish by Japanese longline fishermen in tropical waters of the South Pacific has been increasing rapidly in recent years.

Because of the great commercial value of the species, American and foreign fishery scientists are intensively attacking the problems of its reproduction and early life history, but so far with little success. Albacore with ripe eggs are not taken in the major commercial fisheries, and attempts by Fish and Wildlife Service vessels to collect identifiable larvæ in various areas of the central Pacific have met with no success.

Mr. Otsu's visit to American Samoa, from August 6 to 13, has extended the search for the albacore spawning grounds to a new area. A fleet of Japanese fishing boats is regularly delivering to the American-operated cannery on the island of Tutuila considerable quantities of albacore, most of it caught south of Samoa in the vicinity of the Tonga Islands. These are all the large, deep-swimming fish, taken on longlines, which are thought most likely to form the actively reproducing part of the albacore population.

Through the cooperation of cannery manager Donald Doran, arrangements were successfully made to have samples of albacore ovaries collected regularly, frozen, and forwarded to the Honolulu laboratory for study. Members of the cannery staff will collect specimens from seven fish out of each load delivered and will record the length and weight of the fish. It is estimated that the total number of fish sampled will be about 2,000 per year.

Biologist Otsu reported that the albacore examined by him during his stay in Samoa showed some indications of recent spawning activity, a sign that there is hope that actively spawning fish may turn up at some season of the year in the Samoan landings.

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Advisory Committee Views Activities in Alaska

Favorable comments on the program of the Bureau of Commercial Fisheries, United States Fish and Wildlife Service, in support of the American commercial fishing industry generally and on the pattern of Saltonstall-Kennedy fisheries projects in particular, were expressed by members of the American Fisheries Advisory Committee following their recent meeting in Alaska.

Assistant Secretary of the Interior for Fish and Wildlife Ross Leffler said that the committee, holding its sixth meeting in Ketchikan and Juneau, also had an opportunity to view first hand the activities of the Bureau in Alaska. The Committee visited the Bureau's Fishery Products Laboratory in Ketchikan to see some of the technological research and fishery management activities there.

Members also inspected a cold storage plant and a salmon cannery. In the Juneau area the Committee observed the spawning runs of salmon in the creeks and rivers.

Some of the more important projects being conducted with funds provided by the Saltonstall-Kennedy Act for the betterment of domestic fisheries were explained to the Committee by the use of visual aids. The Committee expressed satisfaction at the progress being made and at the direction being taken by the program.

Members expressed the view that whenever possible the work be conducted by government employees and that only where special conditions exist should contract work be performed. Members also expressed concern over the circumstances which, to an increasing degree, require financing of continuing operations with Saltonstall-Kennedy money. These funds, they believed, should be used for more specialized and critical problems of less permanent duration.

Sixteen of the 19 active members of the Committee attended the meeting. They were: James S. Carlson, Boston, Massachusetts; Ralph E. Carr, Kansas City, Missouri; Mason Case, San Pedro, California; Chris Dahl, Petersburg, Alaska; David H. Hart, Cape May, New Jersey; R. L. Haynie, Jr., Reedville, Virginia; Leon S. Kenney, St. Petersburg, Florida; Donald P. Loker, Terminal Island, California; James McPhillips, Mobile, Alabama; Arthur H. Mendonca, San Francisco, California; J. Richards Nelson, Madison, Connecticut; Moses B. Pike, Eastport, Maine; H. F. Sahlman, Fernandina Beach, Florida; Thomas F. Sandoz, Astoria, Oregon; Arthur Sivertson, Duluth, Minnesota; and Lawrence W. Strasburger, Metairie, Louisiana.

The next meeting of the Committee will be in the spring of 1958.

Chinook Salmon Study

Those powerful, erratic jumpers of the fish world—spring chinook salmon—are gradually revealing their nature to U.S. Fish and Wildlife Service scientists studying them at the new "Fisheries Engineering Research Facility" at Bonneville Dam on the Columbia River.

Built and financed by the U.S. Army Corps of Engineers to gain additional information of fish behavior and methods of economically passing fish at dam sites, the lab has been in operation about a year and a half. Already the big chinooks have registered their likes and dislikes.

Scientists have noted the big chinooks climb a single pool in the experimental fish ladder in 46 seconds or they may loiter in a single pool more than two hours and 53 minutes, they prefer the walls to the center of the pool when passing a weir, and they have shown their sense of smell is very keenly developed.

It has been known for some time that if a person puts his hand in the water of a fish collecting pool the fish will sound and not move again for half an hour or so. Apparently the odor of the hand travels rapidly through the water. It has long been speculated by fish biologists that salmon find their way back to the parent stream by their sense of smell.

"The smell of human odors in the water apparently bothers the fish more than our presence," says Carl Elling, biologist in direct charge of the Bonneville experimental fish lab. "We can be working in the immediate vicinity of the fishways and the fish will swim and jump all around us and we don't seem to bother them as much as if our hand accidentally slips into the water and they get the odor of it."

As to the salmon's jumping—one chinook leaped some eight feet into the air and broke one of the 1000-watt mercury vapor lights overhead, another surprised a woman fish counter by jumping into her counting station through an open window, and a construction worker making minor adjustments on a fishway was almost knocked out of his bosun's chair when a leaping chinook struck him. The drive behind a 40-pound spring chinook salmon is difficult to imagine.

Scientists would like to answer these questions: What type of fishway entrances do salmon and steelhead find most "attractive" at dam sites? How large must these fishways be? What type of fishway can fish pass through quickest? Which fishway type will fatigue salmon the least?

New Tuna Investigations by Tariff Commission

Pursuant to a resolution adopted by the Committee on Finance, United States Senate, on August 20, 1957, the United States Tariff Commission, on August 26, 1957, instituted an investigation with respect to tuna fish, supplemental to the investigation made by the Commission, June 26, 1952.

On March 20, 1953, the Commission submitted to the Finance Committee a report of the results of its investigation with respect to tuna fish in response to that Committee's resolution of June 26, 1952. In its resolution of August 20, 1957, the Committee instructed the Commission "to make a supplementary investigation similar in scope to the investigation made in accordance with the Committee resolution of June 26, 1952, and to report the results of its supplementary investigation to the Committee on or before February 1, 1958."

The resolution of August 20, 1957, directs the Commission to hold a public hearing in the course of the supplementary investigation at which all interested parties shall be given opportunity to appear and be heard with regard to the subject matter of the investigation. The time and place of hearing will be announced later.

President Helps Observe Fish Parade Plans

President Eisenhower congratulated the commercial fisheries on their "important role in the economy of America," in a telegram to Harry A. Trimm, Jr., chairman of the committee for the forthcoming National Fish Week, September 18-28:

Through Senator Payne, I have been reminded of the annual observance of National Fish Week. As one of our nation's oldest and proudest industries, fishing has played an important role in the economy of America from the earliest days of its exploration and discovery. And today, operating with traditional skill and courage, our fishermen bring their highly nutritious and delectable food to the tables of millions of citizens across the land. Congratulations to them and best wishes for the success of National Fish Week.

(signed) Dwight D. Eisenhower.

The National Fish Parade, as the special week has been named by the fishing industry, in cooperation with the U.S. Fish and Wildlife Service, calls attention to the variety of fishery products which contribute so much to the health and well being of Americans, and honors United States' oldest industry.

Each year commercial fisheries become more important to American economy. Last year, the record catch in the United States and Alaska of 5.2 billion pounds of fish and shellfish was worth more than one billion dollars at the retail level. The industry has an investment of $448 million in fishing craft, nets and other equipment and employs 554,000 men and women.

Fishing Vessel Legislation Hits Snag

S. 1483 by Senator Magnuson, a bill to amend the Fishermen's Protective Act of 1954 to afford American flag-fishing vessels and crew members protective insurance for payment of losses sustained and injuries to fishermen caused by illegal acts of foreign nations while on the high seas, ran into trouble on the Senate floor on August 23. The debate lasted for more than an hour, with several Senators suggesting that since the subject matter was of an international character, the Committee on Foreign Relations should give the legislation some thought. Senators Magnuson and Yarborough made a valiant fight to get action but in the end they agreed to consult the Foreign Relations Committee. Consequently, the bill went over until Congress reconvenes next January.

"LEGENDS OF THE SEA"—Theme of San Pedro Fiesta

The annual Fishermen's Fiesta will be held in San Pedro, October 5 and 6. During the two-day festival, fishing fleet vessels are transformed into fairyland floats. This year they will be decorated in the theme, "Legends of the Sea."

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A BIGGER AND BETTER FISHERY MARKET

MOST fishery interests agree that things are looking up for the future. Some of our most troublesome problems are being recognized and helpful solutions searched out—by both business and government authorities. You can read about them on other pages in this magazine.

With the American economy in general on a high level, and most lines of business apparently destined to remain that way, we believe that the fisheries situation also will shape up quite satisfactorily in the days ahead.

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